

Evolution Unit Test – What to Know

Biology I

- Darwin: timeline of *Beagle* voyage and publication of book, title of book
- Ideas influencing Darwin: Hutton, Lyell, Lamarck, Malthus
- Lamarck's theory of evolution – describe, evaluate scientifically
- Artificial selection – define, examples
- Theory of evolution by natural selection
 - Adaptation – define, examples
 - Fitness – define
 - Natural selection – define, describe how process works, what does it act upon?
 - Darwin's evidence – name & describe
 - Evidence after Darwin
 - Summarize main points of Darwin's theory
- Population – define, examples
- Speciation – define, examples, describe what is required for it to occur
- Isolating mechanisms – describe 3 types
- Relative frequency of alleles – define, examples
- Sources of genetic variation – what are 2 main sources
- Single gene traits – describe phenotypes produced, examples
- Polygenic traits – describe phenotypes produced, how to graphically represent phenotypes, examples
- Natural selection on polygenic traits: 3 types – define, describe effect with graphs
- Genetic drift – define, examples, characteristics of populations that experience genetic drift
- Founder effect – describe
- Genetic equilibrium – define
- Hardy-Weinberg principle - 5 conditions required for genetic equilibrium
- Earth history
 - Fossils – define, examples, how fossils form, type of rock they usually form in
 - Relative dating – define, examples
 - Radioactive dating
 - Define, examples
 - Half-life – define, be able to interpret a graph of the decomposition of an element
- Geologic time scale
 - Sequence of 4 eras
 - Main characteristic of 4 eras
 - Periods in each era (you don't need to know the order of the periods)
- Patterns of evolution
 - Mass extinctions – define, examples, causes
 - Adaptive radiation – define, examples
 - Convergent evolution – define, examples
 - Coevolution – define, examples
 - Punctuated equilibrium – define, describe how it modifies Darwin's idea
- Human origins
 - Primates – characteristics
 - Prosimians – examples, relationship to other primates
 - 2 types of monkeys – characteristics, where found
 - Anthropoid genuses – sequence of Australopithecus, Paranthropus, Homo
 - Genus Homo – sequence of habilis, erectus, neanderthalensis, sapiens species